

Remarks

Applicant responds to the Office Action of January 21, 2004. Claims 1-29 and 32-95 are pending in the application. Claims 53-95 have been withdrawn from consideration.

Claim Rejections - 35 USC § 112

Claims 1-26 have been rejected under 35 U.S.C. §112, first paragraph, as being based on a disclosure that is not enabling. The Examiner contends that it is unlikely that the channels created by the embedded non-adhesive material forms would collapse under pressure to form a path of air egress. The Examiner further contends that the Declaration of Mr. Hannington fails to provide any evidentiary support regarding how air egress channels can be formed, and that the Declaration appears to have confused "polymerization" as "curing" of the polymer.

Applicant respectfully submits that the claimed invention is fully enabled. Further, the Examiner's ongoing discourse regarding whether the pressure sensitive adhesive is "cured" or "polymerized" is irrelevant. The declaration of Mr. Hannington explains that the pressure sensitive layer can possess cohesive strength and tackiness at the same time. This principle is well known in the art. Support for this well known principle has been provided previously by the Applicant in the excerpt from Adhesion and Adhesives Technology by Alphonsus B. Pocius.

In his declaration Mr. Hannington explained how the pattern of non-adhesive material forms of the claimed adhesive article provide a path of air egress for air trapped between the adhesive layer and the surface to which the adhesive article is adhered. Specifically, the pattern of non-adhesive material forms embedded into the adhesive layer provides a path of air egress, or path of least resistance, to the end edges of the article. Light finger pressure applied to a trapped "air bubble" within the adhesive, causes the adhesive to "dome up" into the channels created by the non-adhesive material forms, which in turn, causes the channel to fully or partially collapse creating a "path of least resistance" at the adhesive/substrate interface, and allows the trapped air to be moved to the end edges of the adhesive article.

Furthermore, as described in the specification at page 15 with reference to Figures 3a-3c, it is the channels 35 created by the printing process that are collapsed, not the non-adhesive material forms themselves that are collapsed. The non-adhesive material forms are embedded into the adhesive layer to create the channels. As explained in the Declaration, even with modest application of pressure the combination of the geometric contact area of the adhesive and the viscoelastic properties of the adhesive allows the adhesive to debond readily under the

pattern of non-adhesive material forms, e.g., the path of weakness, to form a path of air egress at the adhesive/substrate interface. This is contrary to the Examiner's unsupported statement that "the non-adhesive material forms appear to be irrelevant" to the air egress property. Applicant respectfully submits that the claimed invention is fully enabled by the disclosure of the application.

Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1-26 based on 35 U.S.C. §112, first paragraph.

Claim Rejections - 35 USC § 102

Claims 27 and 36 have been rejected under 35 U.S.C. §102(b) as being anticipated by Calhoun et al. (US 5,273,805). The Examiner contends that when the flexible carrier web of Calhoun, which has a planar surface bearing a predetermined pattern of silicone coated land areas and recesses, reads on the recitation "a pattern of non-adhesive material forms embedded into the lower surface of the adhesive layer."

Applicant respectfully disagrees with the Examiner's contention. Calhoun teaches a flexible carrier web having a flat surface embossed to form a plurality of recesses. The carrier web acts as a release liner for pressure-sensitive adhesive tapes. (Col. 1, lines 10-13). The carrier web has a flexible plastic backing having a front and back surface. The front surface of the plastic backing is embossed to form a plurality of recesses. A layer of crosslinked silicone is then applied to the plastic backing. The back surface of the plastic backing is covered with a low-adhesion backsize coating that in turn is covered with a layer of pressure-sensitive adhesive. (Col. 6, lines 20-57). The crosslinked silicone layer is an integral part of the carrier web. The crosslinked silicone layer is not embedded into the pressure sensitive adhesive layer. Rather the adhesive layer, when separated from the release liner, leaves the silicone layer on the release liner. The release values of the release liner can be controlled simply by selecting the size and/or number of recesses. (Col. 2, lines 50-53).

Whereas in the present invention, non-adhesive materials are embedded directly into the lower surface of the adhesive layer, which is typically a pressure-sensitive adhesive. A facestock is then applied to the upper surface of the adhesive layer. The pattern of non-adhesive materials embedded directly in the adhesive layer provides a path of air egress for the adhesive article. By supplying at least one area of no initial adhesion, air is allowed to flow out from under the construction of the adhesive article. Calhoun et al. does not disclose an adhesive article

comprising a facestock and an adhesive layer having an upper surface and a lower surface, wherein a pattern of non-adhesive materials are embedded directly into the lower surface of the adhesive layer, as claimed in claim 27 and as illustrated in Figs. 4a-4b of the present application.

As such, the invention of claims 27 and 36 are not anticipated based on the disclosure of Calhoun et al. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 27 and 36 under 35 U.S.C. §102(b).

Claim Rejections - 35 USC § 103

Claims 28, 29, 32-35 and 37-52 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Calhoun et al. (US 5,273,805). Examiner contends, as stated above, when the flexible carrier web of Calhoun, which has a planar surface bearing a predetermined pattern of silicone coated land areas and recesses, reads on the recitation “a pattern of non-adhesive material forms embedded into the lower surface of the adhesive layer.” The Examiner further contends that the thickness, the width, the composition, and the pattern of the embedded non-adhesive material forms, as well as the claimed construction of a double sided tape and an adhesive article having a facestock, adhesive layer and release liner would all have been obvious based on the disclosure of Calhoun.

Applicant respectfully disagrees with the Examiner's contention. As stated above, Calhoun discloses a release liner for pressure-sensitive adhesives comprising a flexible carrier web having a front surface embossed with a plurality of recesses and a layer of crosslinked silicone applied to the recesses. The carrier web is adhered to a low-adhesion backsize coating that in turn is covered with a layer of pressure-sensitive adhesive. There is no teaching or suggestion within Calhoun to modify the pressure-sensitive adhesive of Calhoun to embed non-adhesive material forms into the adhesive layer such that the lower surfaces of the non-adhesive materials forms are above the plane of the bottom surface of the adhesive layer. Rather, Calhoun teaches that the embossed, crosslinked silicone coated recesses provide a method to control the release values of the pressure-sensitive adhesive by adjusting the size and/or number of recesses. The crosslinked silicone layer of Calhoun is an integral part of the carrier web. The crosslinked silicone layer is not embedded into the pressure sensitive adhesive layer. Whereas, the present invention utilizes non-adhesive material forms embedded within the adhesive layer to form a path of air egress when the adhesive article is applied to a substrate.

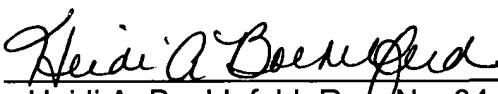
As stated above, Calhoun et al. fails to disclose, teach or suggest the adhesive article of claim 27, and the adhesive articles of claims 28, 29, 32-35 and 37-52 which depend from claim 27. For these reasons, Applicant respectfully requests the withdrawal of the rejection of claims 28, 29, 32-35 and 37-52 under 35 USC §103(a).

Conclusion

In view of the foregoing remarks, Applicant respectfully requests a timely issuance of a notice of allowance.

Respectfully submitted,

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